

Remarks

Process claims 1, 2, 4, 6 and 25 through 28, and product claim 5, as amended, are now pending.

Claims 3, 7 through 24 have been cancelled.

Process claim 1 has been amended require for the process be conducted as an organic solvent solution of a diene-based elastomer.

Process claim 2 has been amended to require that the organic solvent solution of the elastomer constitutes at least two organic solvent elastomer solutions, wherein:

(A) said organic solvent solutions of elastomers are pre-blended prior to addition of said functionalized carbon black, or

(B) at least one of said organic solvent solutions of elastomers is blended with at least one of said organic solvent solutions of elastomers subsequent to said functionalized carbon black addition, or

(C) at least one of said organic solvent solutions of elastomers is blended with at least one of said additional organic solvent solutions of elastomers substantially simultaneously with said functionalized carbon black.

Process claim 4 has been amended to require that the organic elastomer solutions are polymerizates in which at least one of the polymerizates is a living polymerizate to which the functionalized carbon black is added.

Product claim 5 has been amended to depend from process claim 4.

Product claim 6 has been amended to place it an a process form in which the subsequently added reinforcing carbon black is an unpelletized carbon black of a relatively low density.

New claims 25 through 27 depend from process claim 2 as variations thereof.

New claim 28 depends from process claim 1 which requires the subsequently added

precipitated silica to the composite to be pre-treated with a bis(triethoxysilylpropyl) polysulfide.

The Rejection

The following U.S. patents have been relied upon to reject various of the Applicants' claims:

<u>U.S. Patents</u>	
4,816,594	Wengog, et al (Wengog)
6,136,919	Zimmer, et al (Zimmer)

<u>Foreign Patents</u>	
EP1,010,718	Gorl, et al (Gorl)
(corresponds to U.S. Pat. No. 6,433,064)	

First Rejection

Claims 1, 3, 5, 6, 10, 22 and 24 have been rejected under 35 U.S.C. Section 103(a) over Gorl in view of Wengog.

Process claim 1 and product claim 5 have been amended. Product claim 6 has been substantially amended to place it in a process claim from with carbon black limitations.

Claims 3, 10, 22 and 24 have been cancelled.

A reconsideration of the above rejection is requested in view of amendments made to the claims and comments herein.

Second Rejection

Claims 2, 4, 11 through 16, 21 and 23 have been rejected under 35 U.S.C. Section 103(a) over Gorl in view of Wengog and further in view of Zimmer.

Claims 2 and 4 have been amended and claims 11 through 16, 21 and 23 have been cancelled.

A reconsideration of the above rejection is requested in view of amendments made to the claims and comments herein.

Examiner's Objections

In response to the Examiner's indicated objections:

The passage in the Specification on Page 4, Line 27 has been amended to correct the indicated spelling error.

Claims 13 and 14 have been cancelled.

Claims 21 and 23 have been cancelled and process claims 1 and 2 have been significantly amended in response to the Examiner's rejection of claims 2 through 4, 21 and 23 under 35 U.S.C. Section 112, first paragraph.

The Invention

It is important to appreciate that the invention of the Applicants' claim 1 is directed to process of preparing composite by first blending a pre-functionalized carbon black with at least one elastomer in a low shear, organic solvent medium, then recovering the composite from the organic solvent medium.

Claim 2 requires a blend of two organic solvent solutions of elastomers; claim 4 requires the organic solvent solutions of elastomers to be polymerizates; claim 6 requires a non-pelletized carbon black addition to the composite; and claim 28 requires a pre-treated silica addition to the composite.

First Rejection (Claims 1, 3, 5, 6, 10, 22 and 24 under 35 U.S.C. Section 103(a))

The process of the Gori reference is directed to preparing a free-flowing particulate rubber in two steps which require use of an aqueous emulsion rather than the Applicants' required organic solvent solution.

In particular, in a disclosed process of Gori, a portion of a pre-modified carbon black (pre-modified with an organosilicon compound) is blended with an emulsion of a rubber solution followed by, in a second step, adding an additional amount of the pre-modified carbon black. A resulting precipitate is separated and recovered.

Contrarily, the Applicant's amended claims, and particularly amended process claim 1 and its associated dependent claims, are based on the use of an organic solvent solution masterbatching process.

Moreover, Gorl does not teach or suggest use of any combination of two elastomer solutions as is required by the Applicants' amended claim 2 as well as dependent claims 25 through 27. Further, Gorl does not teach or suggest use of any live elastomer polymerizate as is required by the Applicants' amended process claim 4 and product claim 5.

Additionally, Gorl does not teach or suggest any post addition of a precipitated silica to the emulsion derived composite as required by the Applicants' claim 6 or any post addition of any non-pelletized carbon black as is required by the Applicants' claim 28.

Gorl does not teach or suggest any post addition of any pre-treated silica to the emulsion derived composite as required by the Applicants' claim 6 where the precipitated silica is pre-treated with a bis(3-triethoxysilylpropyl) polysulfide.

Upon review the Table in Column 10 of U.S. Patent No. 6,433,064 which is entitled "Products according to the invention in rubber products", and which appears to be the portion of the referenced page 9 of Gorl, the Ultrasil 7000 Gr silica is listed. It is assumed herein that that the process of pre-treatment of the Ultrasil 7000 Gr silica is by the method of the Gorl patent reference, namely by a combination of organosilane compound and elastomer in an aqueous emulsion and not added to any rubber composite as a silica which has been pre-treated before addition to a solvent solution of an elastomer as is required by the Applicants' amended claims.

Accordingly, Gorl, by itself, is significantly and materially deficient for a purpose of rejecting the Applicants' claims as amended, as being obvious under the requirements of 35 U.S.C. Section 103(a).

It is contended that Wengog does not remedy the material deficiencies of Gorl, insofar

as the Applicants' amended claims are concerned, and, moreover that Wengog is also significantly materially deficient for rejecting the Applicants' amended claims. As the Examiner has observed, Wengog relates to use of an aluminum based coupling agent. The Examiner concludes that use of such coupling agent instead of or in addition to the organosilane compound used in Gorl would produce a filler having aluminum hydroxide or aluminum oxide on its surface.

As with Gorl, nowhere does Wengog teach or suggest the Applicants' amended organic solvent solution based process claims.

Accordingly, it is contended that the combination of Gorl and Wengog does not make out a prima facie case of obviousness of the Applicants' amended claims under the requirements of 35 U.S.C. Section 103(a). Indeed, it is contended that the Gorl and Wengog references would have to be significantly re-constructed in full view of the Applicants' specification and claims without any teaching within Gorl to use the teaching of Wengog and without any teaching within Wengog to use the teaching of Gorl to do so.

Second Rejection (Claims 2, 4, 11 through 16, 21 and 23 under 35 U.S.C. Section 103(a))

The cited Gorl and Wengog references, and their combination, are significantly and materially deficient for rejecting various of the Applicants' amended claims as hereinbefore discussed and such rationale extends to the above referenced "Second Rejection".

Interestingly, the Zimmer reference relates to a process of preparing an elastomer/filler composite containing a dispersion of the filler by a specialized polymerization system as well as the resulting composition including a tire with a component thereof. It is not seen how the Zimmer reference corrects the aforesaid material deficiencies of the Gorl and/or Wengog references.

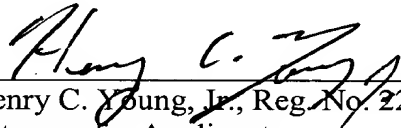
The combination of Gorl, Wengog and Zimmer does not make out a prima facie case of

obviousness of the Applicants' amended claims under the requirements of 35 U.S.C. Section 103(a) without a significant reconstruction of the references themselves.

Conclusion

In view of the amendments made to the claims and comments herein it is contended that the amended claims are unobvious and patentably distinct from a combination of Gorl and Wengog references and from a combination of Gorl, Wengog and Zimmer references under 35 U.S.C. Section 103(a).

Respectfully submitted,



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